DOCUMENT RESUME

ED 144 801 SE 023 058

AUTHOR Denmark, Tom, Ed.
TITLE Bibliography for 1974 Fall Testing Program and Analysis of the Data.
INSTITUTION Florida State Univ., Tallahassee. Project for the Mathematical Development of Children.
SPONS AGENCY National Science Foundation, Washington, D.C.
PUB DATE [76]
GRANT NSF-PES-74-18106-A-03
NOTE 120p.; For related documents, see SE 023 057, SE 023 060-066, SE 023 068-072; Contains occasional light and broken type

EDRS PRICE MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS Achievement; Cognitive Development; *Educational Research; *Elementary School Mathematics; Grade 1; Grade 2; Instrumentation; *Mathematical Concepts; Primary Education; *Tests
IDENTIFIERS *Project for Mathematical Development of Children

ABSTRACT

Contained in this publication are seven items pertaining to the PMDC testing program: (1) scale and test administration directions for grade 1 and (2) for grade 2, (3) description of Hollingshead Socioeconomic Index, (4) School Profile and Class Profile Questionnaires, (5) master record forms, (6) pupil score sheet and report on the preliminary testing program, and (7) summaries of first and second grade data by individual schools. (MS)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED144801

Bibliography for
PMDC Technical Report
No. 1

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Robert M. Johnson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Bibliography for
1974 Fall Testing Program and Analysis of the Data

Edited by Tom Denmark

SE 023 058

Pmdc

Portions of this publication may be reproduced without securing permission from the Project for the Mathematical Development of Children (PMDC).

Financial support for the Project for the Mathematical Development of Children has been provided by the National Science Foundation: Grant No. PES 74-18106-A03.

TABLE OF CONTENTS

List of Tables v

Preface vii

A. SCALE AND TEST ADMINISTRATION DIRECTIONS FOR FIRST GRADE TESTING . . 1

B. SCALE AND TEST ADMINISTRATION DIRECTIONS FOR SECOND GRADE TESTING . 15

C. DESCRIPTION OF HOLLINGSHEAD SOCIOECONOMIC INDEX--NLSMA REPORTS, NO. 9, NON-TEST DATA 45

D. SCHOOL PROFILE QUESTIONNAIRE AND CLASS PROFILE QUESTIONNAIRE 59

E. MASTER RECORD FORMS 63

F. REPORT ON PRELIMINARY TESTING PROGRAM--PUPIL SCORE SHEET 69

G. SUMMARIES OF FIRST AND SECOND GRADE DATA BY INDIVIDUAL SCHOOLS . . . 75

LIST OF TABLES

Tables 1-27 may be found in PMDC Technical Report No. 1, 1974 Fall Testing Program and Analysis of the Data.

TABLES

28 Summary of Test Data for School One: Grade One 77
29 Summary of Test Data for School One: Grade Two 78
30 Summary of Test Data for School Two: Grade One 79
31 Summary of Test Data for School Two: Grade Two 80
32 Summary of Test Data for School Three: Grade One 81
33 Summary of Test Data for School Three: Grade Two 82
34 Summary of Test Data for School Four: Grade One 83
35 Summary of Test Data for School Four: Grade Two 84
36 Summary of Test Data for School Five: Grade One 85
37 Summary of Test Data for School Six: Grade One 86
38 Summary of Test Data for School Six: Grade Two 87
39 Summary of Test Data for School Seven: Grade One 88

PREFACE

This publication consists of the Items (A-G) listed in the Bibliography (p. 53) of PMDC Technical Report No. 1, 1974 Fall Testing Program and Analysis of the Data.

The contents of this publication are actual reproductions of the materials distributed to PMDC staff members in conjunction with the conduct of the PMDC Fall 1974 Testing Program. These materials are published for the purpose of providing the reader with a historical account of the Fall 1974 Testing Program.

Thanks are due to the PMDC administrative assistant, Janelle Hardy, for coordinating the technical aspects of the preparation of this publication, to Maria Pitner for editing the manuscript, and to Joe Schmerler and Julie Rhodes for the typing.

ITEM A

SCALE AND TEST ADMINISTRATION DIRECTIONS

FOR FIRST GRADE TESTING

FIRST GRADE: FALL INVENTORY

SMSG Tests*

Directions for giving tests.
Thirty pupil score sheets.

* The SMSG materials in this manual and the related pupil materials are published in ELMA Technical Reports No. 2, Grade 1 Test Batteries, Description and Statistical Properties of Scales, Stanford University, 1971. These materials are reproduced with permission of the Director of SMSG, but without endorsement of the School Mathematics Study Group.

PMDC

Fall Inventory, 1974 --- First Grade

GENERAL DIRECTIONS FOR ADMINISTERING FORM 1-01

1. Setting for Administration of Tests

It is important to have a separate room, if at all possible, so that interruptions and distractions are minimized.

In introducing these tests to the child, make certain that they are always referred to as games and not as tests. The child will feel more comfortable if this is not presented as a testing situation and if the tester chats with the child to put him at ease before starting.

2. Equipment

You will need a table and two chairs. Preferably, the table and chairs should be low (from the kindergarten or first-grade classroom) so that they are a comfortable height for the child. Seat the child across the table from you.

The materials you will need are those supplied and are contained in the test kit.

3. Procedure

Read over the instructions for administering the tests several times, and become familiar with the materials before you start testing your children.

The instructions for you, as tester, are typed in lower case. What you actually say to the child is typed in capital letters.

Follow the written directions carefully. Do not probe to get an answer beyond what is suggested in the directions. This is an evaluation and should not be used as a teaching situation.

Use reassurance without specifying that responses are right or wrong. This may be done in a variety of ways:

Repeating what the child has said in a reassuring voice.
Remarks such as "Um - Hum," "All right."
Comments between tests such as "You do these very well."
Conversation with the child between tests.

In order that the child not experience failure, certain tests are not to be continued if the child fails 3 tasks in that part of the test. This will be noted in the instructions for the specific tests. On tests such as Ordering you will continue the entire test whether the child misses three tasks or not.

Keep all equipment in a box under the table to your right. Place on the table only those items required for a given task, along with the instructions and score sheets for that particular task. Remove materials used for a task from the table before beginning the next part of the testing.

You will find that many of the children become fascinated by the toys being used as test materials. This may interfere with their attention to the task itself. In these instances, tell the child that he will have a chance to play with the toys after you and he have finished the games you will do together. Make certain that you do, then, permit the child to have a few minutes to play with the toys he found most interesting. This can be done without spending much extra time by allowing the child to play while you are sorting your materials and getting them ready for testing the next child.

4. Scoring

The scoring sheets should be completely filled out.

Be certain to enter the pupil's name, I.D. number (optional), school, teacher's name, tester's name and date of the testing on each scoring sheet. Use the "Comments" space whenever relevant. If there is insufficient space for comments for any sub-test, make the comments on the last sheet of the booklet (labeled "Additional Comments"). Identify clearly the sub-test to which the comments refer. If doubtful about the correctness of a response, write exactly what the child said in the comment space.

Read over specific scoring directions for each test (e.g., instructions for scoring Ordering).

5. Important Considerations

In order for these test results to be meaningful:

(a) It is imperative that the tester adhere to the written directions as closely as possible. Rapport with the child is crucial; however, cueing the child beyond the written directions invalidates the results.

(b) It is imperative that recording of children's performance on the score sheet be as accurate as possible. Score sheets may be completed in pencil; overemphasis on neatness may be unnecessarily time-consuming. Entries should be legible and accurate; neatness is not a primary consideration.

(c) It is imperative that every sub-test be completely recorded.

COUNTING MEMBERS OF A GIVEN SET - PICTURE CARDS

TEST MATERIALS:

10 6" X 7" cards with varying numbers of drawings of familiar objects on each card. On the back of each card at the top is printed "Counting Members of a Given Set - Top of Card..." (the cards are numbered 1 through 10 to indicate the order in which they are to be presented to the child), and a digit in the lower left corner which indicates the number of objects pictured on the front of the card.

TEST DIRECTIONS:

Place Card 1 in front of the child and say:

HOW MANY MEMBERS ARE THERE IN THIS SET?

If no response, say:

HOW MANY DRAWINGS ARE ON THIS CARD?

Continue in the order and with the position of the cards as marked on the back for each card, using the same directions as for Card 1.

Stop after the child has made three errors in counting.

Note that the correct answer is printed in the lower left corner on the back of each card.

EQUIVALENT SETS - DOTS

TEST MATERIALS:

20 buttons - 1/2 inch diameter, white, plastic

1 sheet of 11" X 14" white construction paper

6. 6" X 7" cards with varying numbers of dots of varying sizes on each card. On the back of each card at the top is printed "Equivalent Sets - Top of Card ..." (the cards are numbered 1 through 6 to indicate the order in which they are to be presented to the child), and a digit in the lower left corner which indicates the number of dots pictured on the front of the card.

TEST DIRECTIONS:

Heap the buttons to the child's left. Place the sheet of construction paper in front of him.

I AM GOING TO SHOW YOU SOME CARDS WITH DOTS ON THEM.

Show the child Card 1. Place it above his sheet of paper and say:

ON THIS SHEET (point to his construction paper) MAKE A SET, WITH THE BUTTONS, WHICH IS EQUIVALENT TO THIS SET (pointing to the card).

If the child does not respond, say:

MAKE A SET WITH YOUR BUTTONS ON THIS SHEET (point to construction paper) THAT HAS THE SAME NUMBER OF MEMBERS AS MY SET HAS (point to your number card).

Pause after the child finishes, and remove the buttons from his paper to the side of the table each time. Continue with the cards in the order and position as marked on the back of each card, using the same directions as for Card 1.

Have on the table only the card for which the child is constructing an equivalent set. Keep all other cards off of the table.

Stop after the child has made three errors in constructing sets.

Note that the correct response (number of dots on the card) is printed in the lower left corner on the back of each card.

Grade 1
Fall

Form 1-01
Items 22-32

ORDERING - OBJECTS AND SHAPES

TEST MATERIALS:

4 buttons - brown, plastic, measuring the following diameters:

$$1",\ \frac{7}{8}",\ \frac{3}{4}",\ \frac{5}{8}"$$

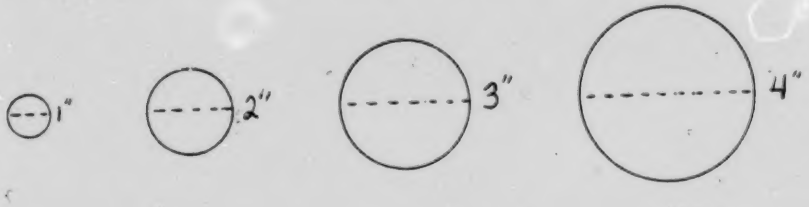
5 cubes - styrofoam, measuring the following dimensions:

$$3",\ 2\frac{1}{2}",\ 2",\ 1\frac{1}{2}",\ 1"$$

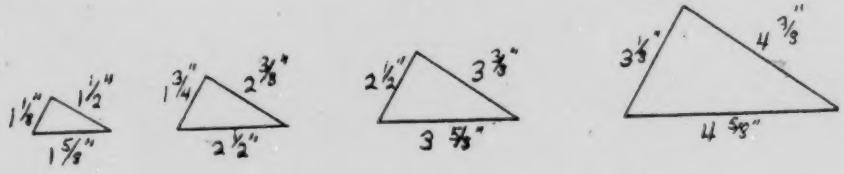
5 drinking straws - plastic, measuring the following lengths:

$$5\frac{1}{4}",\ 4\frac{1}{2}",\ 3\frac{1}{2}",\ 3",\ 2\frac{1}{2}"$$

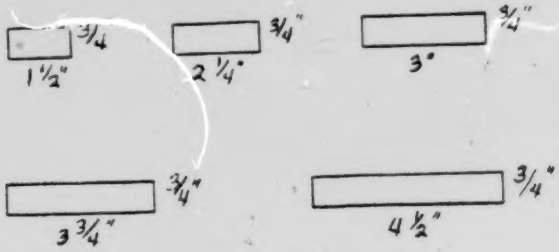
4 circles - red, cut from light-weight cardboard



4 triangles - red, cut from light-weight cardboard



5 rectangles - red, cut from light-weight cardboard



TEST DIRECTIONS:

Scoring Instructions for "Ordered" Items (1a, 2, 3a, 4a, 5a, and 6a)

In recording the Ordered items, the "Ordered with error" column should be checked when the child is able to partially order the set of objects or shapes (e.g., ends correct, confusion in middle size items; one reversal; or some other partially correct attempt). The "Randomly ordered" column should be checked when the child has no concept of ordering, as evidenced by no systematic, ordered placement of the shapes or objects.

Directions:

1. Circular Shapes

   a. Hand the child the 4 circular regions in a stack. Have the shapes arranged in the following order before handing them to him: 3rd largest on top, smallest, largest, 2nd to largest on bottom.

      HERE ARE SOME CIRCULAR SHAPES. CAN YOU PUT THESE IN A LINE SO THAT THEY GO FROM THE LARGEST TO THE SMALLEST?

      Record on scoring sheet, item 1a, under Ordered.

   b. GIVE ME THE SMALLEST CIRCLE.

      Record on scoring sheet, item 1b, under Handed.

2. Triangular Shapes

   Hand the child the 4 triangular regions in a stack. Have the shapes arranged in the following order before handing them to him: 2nd to largest on top, largest, smallest, 3rd to largest on bottom.

   HERE ARE SOME TRIANGULAR SHAPES. CAN YOU PUT THESE IN A LINE SO THEY GO FROM THE SMALLEST TO THE LARGEST?

   Record on scoring sheet, item 2, under Ordered.

3. Buttons

   a. Place the 4 buttons in a pile in front of the child.

      HERE ARE SOME BUTTONS OF DIFFERENT SIZES. PUT THEM IN A LINE FROM THE SMALLEST TO THE LARGEST.

      Record on scoring sheet, item 3a, under Ordered.

   b. NOW GIVE ME THE SMALLEST BUTTON.

      Record on scoring sheet, item 3b, under Handed.

4. Blocks

a. Place the 5 styrofoam blocks in a heap in front of the child.

HERE ARE SOME BLOCKS. PUT THEM IN A LINE SO THEY GO FROM THE LARGEST TO THE SMALLEST.

Record on scoring sheet, item 4a, under Ordered.

b. GIVE ME THE LARGEST BLOCK.

Record on scoring sheet, item 4b, under Handed.

5. Plastic Straws

a. Hand the child the 5 straws in a bundle (with rubber band removed).

HERE ARE SOME STRAWS OF DIFFERENT LENGTHS. PUT THESE IN A LINE SO THEY GO FROM THE LONGEST TO THE SHORTEST.

In scoring this item, note that the child's placement of the straws in either a vertical or horizontal position to himself is acceptable as long as the straws are correctly ordered.

Record on scoring sheet, item 5a, under Ordered.

b. NOW HAND ME THE SHORTEST STRAW.

Record on scoring sheet, item 5b, under Handed.

6. Rectangular Shapes

a. Hand the child the 5 rectangular shapes in a stack in the following order: next to smallest on top, 3rd to largest, smallest, largest, 2nd to largest on the bottom.

HERE ARE SOME RECTANGULAR SHAPES. CAN YOU PUT THESE IN A LINE FROM THE LONGEST TO THE SHORTEST?

In scoring this item, note that the child's placement of the rectangular shapes in either a vertical or horizontal position to himself is acceptable as long as the shapes are correctly ordered.

Record on scoring sheet, item 6a, under Ordered.

b. NOW HAND ME THE LONGEST RECTANGULAR SHAPE.

Record on scoring sheet, item 6b, under Handed.

TESTER'S SCORING GRID:

Item No.	Ordered:		Ordered correctly Largest-smallest or Smallest-largest	Ordered with error (ends correct, confusion in middle size items or some other partially correct attempt)	Randomly ordered	No Attempt	Handed:		Correct (✓) Response	Incorrect (✓) Response	No (✓) Attempt
22-23	1a	Circular Shapes					1b	smallest circle			
24	2	Triangular Shapes									
25-26	3a	Buttons					3b	smallest button			
27-28	4a	Blocks					4b	largest block			
29-30	5a	Plastic Straws					5b	shortest straw			
31-32	6a	Rectangular Shapes					6b	longest shape			

Form 1-01

PUPIL SCORE SHEET First Grade : Fall Inventory, 1974

Pupil's Name: _____

I.D. Number : _____

School: _____

Teacher's Name: _____

Tester's Name : _____

Date Given: _____

Comments:

COUNTING MEMBERS OF A GIVEN SET

Picture Cards

Item No.	Card No.	Counted Correctly	Attempted, Incorrect	No Attempt
6	1			
7	2			
8	3			
9	4			
10	5			
11	6			
12	7			
13	8			
14	9			
15	10			

Comments:

EQUIVALENT SETS

Dots

Item No.	Card No.	Correct Response	Incorrect Response	No Attempt
16	1			
17	2			
18	3			
19	4			
20	5			
21	6			

Comments:

ORDERING

Item No.	Ordered:		Ordered correctly Largest-smallest or Smallest-largest	Ordered with error (ends correct, confusion in middle size items or some other partially correct attempt)	Randomly ordered	No Attempt	Handed:		Correct (✓) Response	Incorrect (✓) Response	No (✓) Attempt
22-23	1a	Circular Shapes					1b	smallest circle			
24	2	Triangular Shapes									
25-26	3a	Buttons					3b	smallest button			
27-28	4a	Blocks					4b	largest block			
29-30	5a	Plastic Straws					5b	shortest straw			
31-32	6a	Rectangular Shapes					6b	longest shape			

Comments:

ITEM B

SCALE AND TEST ADMINISTRATION DIRECTIONS

FOR SECOND GRADE TESTING

SECOND GRADE: FALL INVENTORY

SMSG Tests*
- Directions for administering tests.
- Pupil data sheet.

* The SMSG materials in this manual and the related pupil materials are published in ELMA Technical Reports No. 3, Grade 2 Test Batteries, Descriptions and Statistical Properties of Scales, Stanford University, 1971. These materials are reproduced with permission of the Director of SMSG, but without endorsement of the School Mathematics Study Group.

Grade 2
Fall

Form 2-01
Instructions

SCHOOL MATHEMATICS STUDY GROUP

ELEMENTARY MATHEMATICS PROJECT

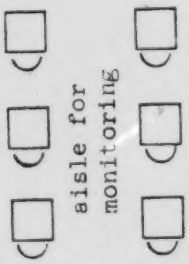
FORM 2-01

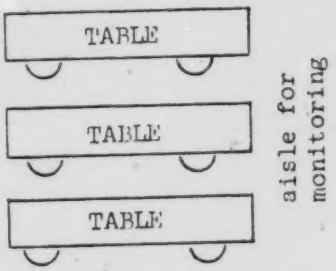
Fall Inventory, 1968 --- Grade 2

GENERAL DIRECTIONS FOR ADMINISTERING GROUP FORM 2-01

1. Setting for Administration of Tests

As with the previous tests you have given, you will need a separate room. Seating arrangements for the test are especially important for several reasons: first, to eliminate all possibilities for copying; second, to minimize one child's distracting another; and third, to permit you more easily to monitor all of the children in the group. You will need five (or six) separate desks at which the children may work. If separate desks are not available, one alternate is to carefully space children at several long tables. These diagrams show two possible arrangements:





If the room is small and the children must work at tables, place standing folders or boxes between them as barriers. Do not have the children facing each other across tables.

Since we cannot foresee all possible problems in physical arrangements, we will rely on your ingenuity to make certain that each child's responses are independently arrived at.

2. Materials

Directions for administering Form 2-01

~~Alpha-by-School Roster~~

Pupil answer booklets

Pencils

3. Procedure

~~The student roster is printed in alphabetical sequence by school, rather than by class, since we have no way yet of knowing the class structure. The labeled answer booklets have been packaged in the same sequence so that you will be able to find particular booklets more easily.~~

~~When you arrive at the school for testing and check with the principal, you should ask him for the names of the second grade teachers. Consulting either with each teacher, or with the principal you will be able to determine which students are in each class.~~

In general, administer this test to five children in a group. However, in no instance give the test to a group larger than six. In selecting the group of five children for testing, try to minimize disruption of classroom activity. In all instances comply with the teacher's wishes in selecting the set of children to be taken for the group testing.

Read over, several times, the instructions for administering the test to become familiar with the items and the directions before you start testing.

4. Important Considerations

(a) It is imperative that you adhere to the written directions as closely as possible. Do not change the wording on any item. We are interested in determining if the children understand the terminology that is used in the test.

(b) It is imperative that you monitor the children in the group testing situation by walking around and making certain that each child understands, is on the right page and item, and is marking only one response to each item. Also, the monitoring will permit you to make sure that each child is working independently of the other children in the group.

(c) Atmosphere should be as anxiety-free as possible. Set the tone by talking to the children as they enter the examination room and are being seated at prearranged desks.

5. Test Administration

Form 2-01 has 26 items which require instructions to be read by the tester. The remainder of the items are to be done by the children by themselves without any reading of instructions for separate items.

The tester's manual for Form 2-01 begins with the 20 pages that are to be read to the children exactly as they are written (except the word "pause"). On pages 3, 5, 7, 9, and 12 of the tester's manual,

you will notice that a line has been drawn through the words which are printed in the children's answer booklets. In each case, slightly different words have been typed in for you to read instead. These instructions which you will read are a little more explicit than the ones which appear in the students' answer booklet.

Children are not to turn the page until you tell them to do so. Watch children to be sure that all are on the page corresponding to the one that is to be read. Following these pages, there is a page of instructions that is to be read to the children before they do the remainder of the test, which is the computation section of the test. The computational tasks are to be completed at the child's own rate.

Those children who finish first will be given a page with dot-to-dot activity to occupy them until the rest of the children have finished. The slower children will also be given this page when testing has been completed. All children can keep these pages. (This activity only serves to keep the fast children from disturbing the slower children.)

Directions are to be read slowly and distinctly as the tester circulates among the children. You will note that each instruction is read at least twice so that the tester is able to detect those children who do not understand. With each instruction, circulate through the group to see that each child understands what is meant. Allow several seconds after the final item instructions for all children to respond before saying "NOW TURN TO THE NEXT PAGE." Make sure that all children are on the correct page before beginning instructions for that page. If a child indicates that he does not know an answer, say: "MARK THE ANSWER YOU THINK IS RIGHT." However, do not insist that the child make a response. Do reassure him that there may be a question not yet covered in class, but give no further hints.

In the event a child wants to change his response, make sure he has erased the original response before marking another.

If a child talks during testing period, the tester reminds him reassuringly that he is not to talk, that you will know which answer he thought was the correct one when you look at his booklet.

After testing has begun, children do not usually look up to watch the tester's demonstrations; hence it may be necessary for you to point to the "top" and "bottom" of a child's paper when you find him recording answers in the wrong area.

Tell the children they are not to do the item on the bottom half of each page until you tell them to do so. Repeat this statement during the test until all children have learned to wait until you have read each question to them before marking their booklets.

Grade 2
Fall

Form 2-01
Instructions

The sample page (page 1 of manual and pupil booklet) is to be used for helping the children to understand the directions, vocabulary, and format of the test to follow. Try to make certain that any questions the children may have about "top" and "bottom," marking, etc., are answered in doing this sample page. Be sure that the child marks one item and only one in each row. Do not tell the child whether his answer is correct. The sample page is being used only to teach the child the method of marking his answers in his booklet.

TESTER'S MANUAL - FORM 2-01

After the children are seated, tell them "I AM GOING TO READ YOU SOME QUESTIONS. I WANT YOU TO ANSWER THEM BY PUTTING MARKS IN THE BOOKLETS THAT ARE IN FRONT OF YOU ON THE TABLE. PLEASE DON'T TURN ANY PAGES IN THE BOOKLETS UNTIL I TELL YOU TO DO SO."

"NOW, OPEN YOUR BOOKLETS." (Watch to be sure that each child has opened his booklet to the sample page.)

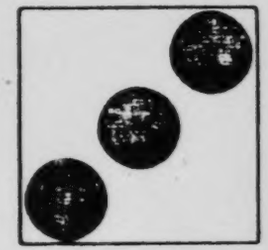
Say: "I AM GOING TO ASK YOU SOME QUESTIONS. YOU ARE TO MARK THE ONE THING ON YOUR SHEET THAT BEST ANSWERS THE QUESTION. DO YOU KNOW WHAT MARK MEANS?" (Pause for responses and reinforce those responses offered by children. They may use any system of marking that is familiar to them, i.e., circle, cross, ex, underline, etc.). "YES, YOU MAY (CIRCLE, CROSS, ETC.) THE ANSWER YOU THINK BEST ANSWERS THE QUESTION."

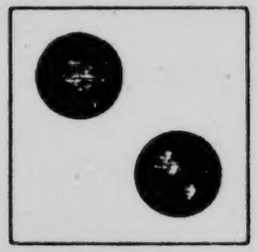
"IF YOU NEED THINGS TO COUNT, USE YOUR FINGERS OR MAKE MARKS ON THE PAGE. LISTEN CAREFULLY TO THE QUESTION, THEN MARK THE ANSWER. ARE YOU READY? (Tester reads the first of the sample questions given in the tester's manual and continues as indicated.)

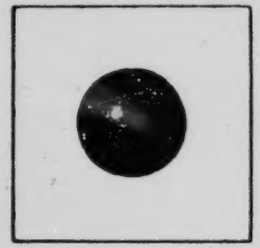
THIS PAGE HAS TWO QUESTIONS. LOOK AT THE PICTURES AT THE TOP OF THE PAGE. DO YOU KNOW WHAT I MEAN BY "TOP" OF THE PAGE? (Explain if there are children who do not know top.) LOOK AT THE PICTURES AT THE TOP AND LISTEN TO THE QUESTION.

WHICH PICTURE HAS THREE DOTS?

MARK THE PICTURE THAT HAS THREE DOTS. MAKE A BIG MARK THAT IS EASY TO SEE. (Pause while all children finish.)







NOW LOOK AT THE NUMBERS AT THE BOTTOM OF THE PAGE. LISTEN TO THE QUESTION. WHEN YOU ARE COUNTING,

WHAT NUMBER COMES AFTER FOUR?

MARK THE NUMBER THAT COMES AFTER FOUR. (Pause while all children finish.)

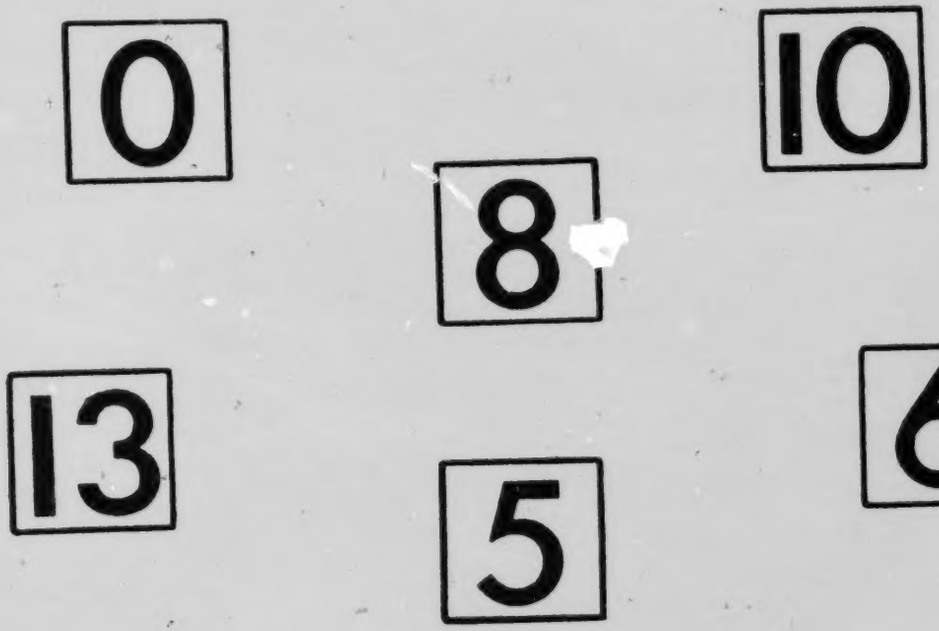
3	4	5

VERY GOOD. NOW, TURN TO THE NEXT PAGE.

REMEMBER, LISTEN TO THE QUESTION, THEN MARK THE ANSWER ON THE BOOKLET. (Make sure each pupil has page 2-1.) SEE THE NUMBERS ON THIS PAGE?

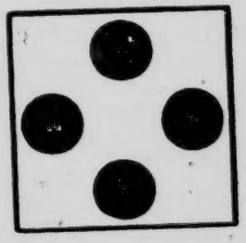
WHICH NUMBER IS LARGEST?

MARK THE NUMBER THAT IS LARGEST. (Pause.)



NOW, TURN TO THE NEXT PAGE.

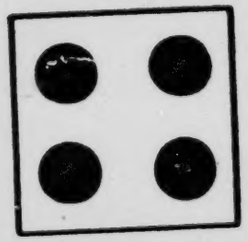
LOOK AT THE PICTURE AT THE TOP OF THE PAGE. SEE THE PICTURE AT THE TOP?

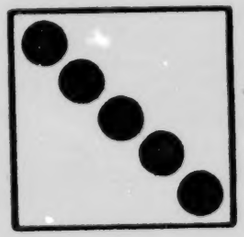


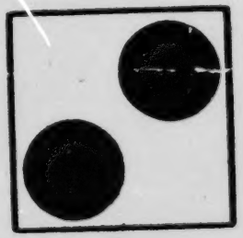
NOW WHICH PICTURE AT THE BOTTOM OF THE PAGE HAS FEWER DOTS THAN THE PICTURE AT THE TOP? (Pause)

WHICH PICTURE BELOW HAS FEWER DOTS THAN THE PICTURE AT THE TOP?

MARK THE PICTURE WHICH HAS FEWER DOTS. (Pause)







NOW, TURN TO THE NEXT PAGE.

THIS PAGE HAS TWO QUESTIONS. LOOK AT THE NUMBERS AT THE TOP OF THE PAGE.
SEE THE NUMBERS AT THE TOP?

WHICH NUMBER IS BETWEEN EIGHT AND FIVE?

MARK THE NUMBER THAT IS BETWEEN EIGHT AND FIVE. (Pause)

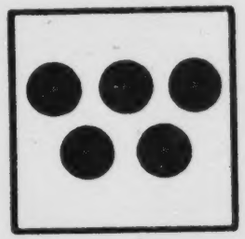
NOW LOOK AT THE NUMBERS AT THE BOTTOM OF THE PAGE. SEE THE NUMBERS AT THE BOTTOM?

WHICH NUMBER IS BETWEEN FOUR AND SEVEN?

MARK THE NUMBER THAT IS BETWEEN FOUR AND SEVEN. (Pause)

NOW, TURN TO THE NEXT PAGE.

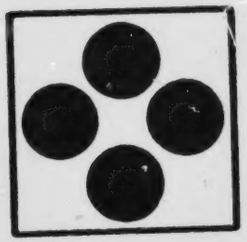
LOOK AT THE PICTURE AT THE TOP OF THE PAGE. SEE THE PICTURE AT THE TOP?

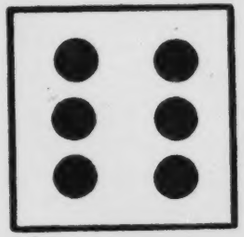


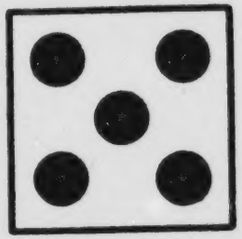
WHICH PICTURE AT THE BOTTOM OF THE PAGE HAS MORE DOTS THAN THE PICTURE AT THE TOP?

WHICH PICTURE BELOW HAS MORE DOTS THAN THE PICTURE AT THE TOP?

MARK THE PICTURE THAT HAS MORE DOTS THAN THE PICTURE AT THE TOP. (Pause)







NOW, TURN TO THE NEXT PAGE.

LOOK AT THE NUMBERS AT THE TOP OF THE PAGE. SEE THE NUMBERS AT THE TOP?

WHICH MEANS THE GREATEST NUMBER OF THINGS?

MARK THE NUMBER THAT MEANS THE GREATEST NUMBER OF THINGS (Pause)

38 29 5 0

LOOK AT THE NUMBERS AT THE BOTTOM OF THE PAGE.

WHICH MEANS THE LEAST NUMBER OF THINGS?

MARK THE NUMBER THAT MEANS THE LEAST NUMBER OF THINGS. (Pause)

12 9 2 53

NOW, TURN TO THE NEXT PAGE.

LOOK AT THE NUMBERS IN THE BOXES.

WHICH ONE HAS A FIVE IN THE TENS PLACE?

WHICH NUMBER HAS A FIVE IN THE TENS PLACE?

MARK THE NUMBER THAT HAS A FIVE IN THE TENS PLACE. (Pause)

15

5

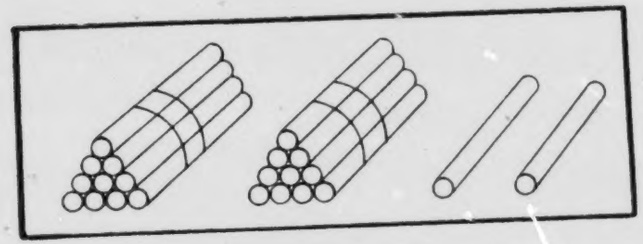
51

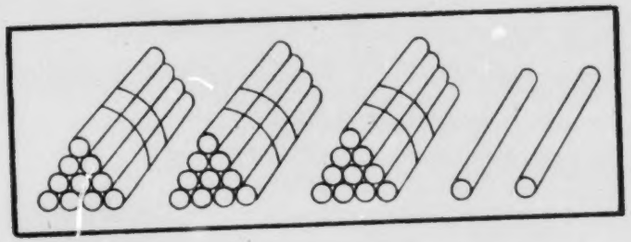
NOW, TURN TO THE NEXT PAGE.

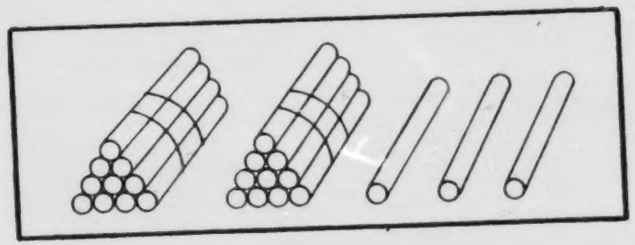
LOOK AT THE PICTURES.

WHICH PICTURE SHOWS **32** ?

MARK THE PICTURE THAT SHOWS 32. (Pause)







NOW, TURN TO THE NEXT PAGE.

THIS TIME YOU ARE TO WRITE A NUMBER IN THE BOX. WHICH NUMBER TELLS HOW MANY TENS ARE IN TWENTY-EIGHT?

28

WHICH NUMBER TELLS HOW MANY TENS?

WRITE THE NUMBER THAT TELLS HOW MANY TENS. (Pause)

NOW, TURN TO THE NEXT PAGE.

LOOK AT THE NUMBERS AT THE TOP OF THE PAGE. SEE THE NUMBERS AT THE TOP?

WHICH NUMBER MEANS FIVE TENS AND TWO ONES?

MARK THE NUMBER THAT MEANS FIVE TENS AND TWO ONES. (Pause)

52 25 7

NOW LOOK AT THE NUMBERS AT THE BOTTOM OF THE PAGE. SEE THE NUMBERS AT THE BOTTOM?

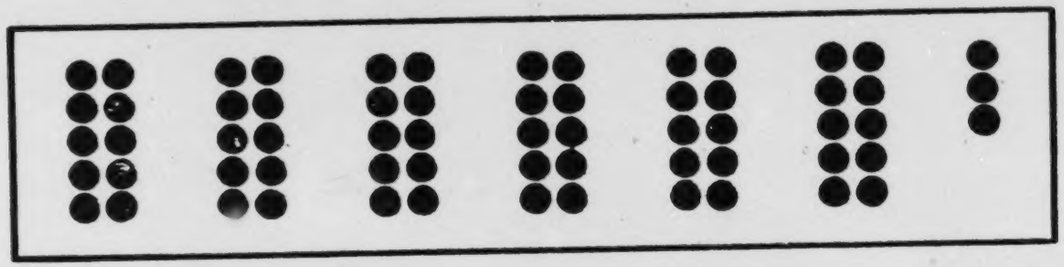
WHICH NUMBER MEANS ONE TEN AND THREE ONES?

MARK THE NUMBER THAT MEANS ONE TEN AND THREE ONES. (Pause)

4 13 31

NOW, TURN TO THE NEXT PAGE.

LOOK AT THE PICTURE AT THE TOP OF THE PAGE. SEE THE PICTURE AT THE TOP?



HOW MANY DOTS ARE IN THE PICTURE?

MARK THE NUMBER AT THE BOTTOM THAT TELLS HOW MANY DOTS.

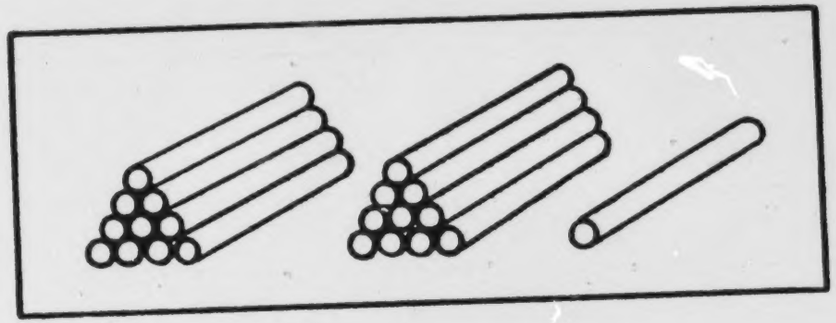
(Pause, but not long enough for the children to count all the dots.)

MARK THE NUMBER THAT TELLS HOW MANY DOTS ARE IN THE PICTURE.

7	36	63	70

NOW. TURN TO THE NEXT PAGE.

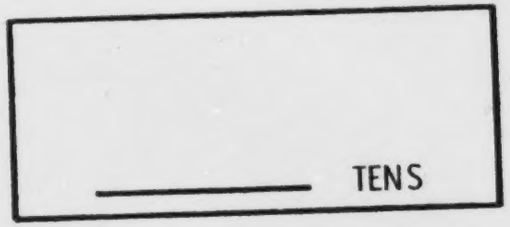
THIS TIME YOU ARE TO WRITE A NUMBER IN THE BOX.



LOOK AT THE PICTURE. HOW MANY GROUPS OF TEN ARE THERE?

LOOK AT THE PICTURE. HOW MANY TENS ARE THERE?

WRITE THE NUMBER THAT TELLS HOW MANY TENS. (Pause)



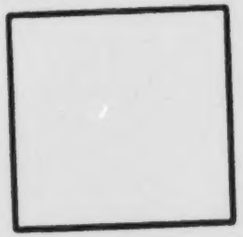
NOW, TURN TO THE NEXT PAGE.

THIS TIME AGAIN, YOU ARE TO WRITE A NUMBER IN THE BOX. LOOK AT THE THIRTY-SEVEN.

37

WHICH NUMBER IS IN THE ONES PLACE?

WRITE THE NUMBER THAT TELLS HOW MANY ONES. (Pause)

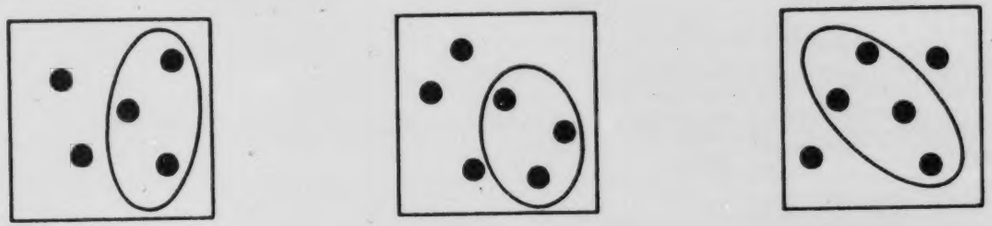


NOW, TURN TO THE NEXT PAGE.

LOOK AT THE PICTURES AT THE TOP OF THE PAGE.

WHICH PICTURE SHOWS FIVE MINUS THREE EQUALS TWO? (Pause)

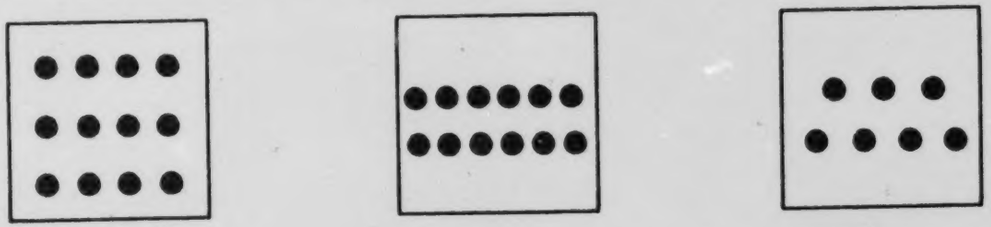
MARK THE PICTURE THAT SHOWS FIVE TAKE AWAY THREE EQUALS TWO.



NOW LOOK AT THE PICTURES AT THE BOTTOM OF THE PAGE. (Pause)

WHICH PICTURE SHOWS THREE TIMES FOUR? (Pause)

MARK THE PICTURE THAT SHOWS THREE TIMES FOUR.

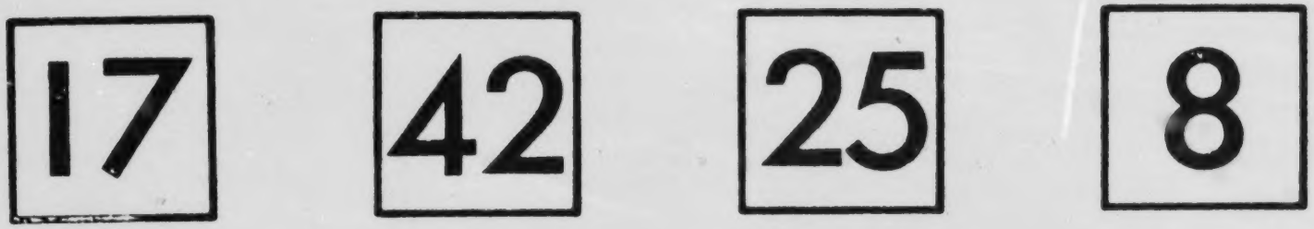


NOW, TURN TO THE NEXT PAGE.

LISTEN TO THE STORY. THEN MARK THE NUMBER THAT ANSWERS THE QUESTION. LISTEN CAREFULLY.

TOM AND JIM SHARE A BAG OF MARBLES. ONE DAY TOM TAKES TWENTY-FIVE OF THE MARBLES TO SCHOOL AND JIM TAKES THE OTHER SEVENTEEN. THE NEXT DAY TOM TAKES SEVENTEEN MARBLES. HOW MANY MARBLES ARE THERE FOR JIM TO TAKE? (Pause)

TOM AND JIM SHARE A BAG OF MARBLES. ONE DAY TOM TAKES TWENTY-FIVE OF THE MARBLES TO SCHOOL AND JIM TAKES THE OTHER SEVENTEEN. THE NEXT DAY TOM TAKES SEVENTEEN MARBLES. HOW MANY MARBLES ARE THERE FOR JIM TO TAKE? MARK THE NUMBER THAT TELLS HOW MANY MARBLES THERE ARE FOR JIM TO TAKE.



NOW, TURN TO THE NEXT PAGE.

LOOK AT THE NUMBERS AT THE TOP OF THE PAGE. LISTEN CAREFULLY TO THE STORY.

SUE HAD ONE CRAYON. MARY GAVE HER TWO MORE CRAYONS. HOW MANY CRAYONS DOES SUE HAVE NOW? (pause)

SUE HAD ONE CRAYON. MARY GAVE HER TWO MORE CRAYONS. HOW MANY CRAYONS DOES SUE HAVE NOW? MARK THE NUMBER THAT TELLS HOW MANY CRAYONS SUE HAS NOW.

1	2	3	4

NOW LOOK AT THE NUMBERS AT THE BOTTOM OF THE PAGE. LISTEN CAREFULLY TO THE STORY.

MARY HAD SOME MONEY. SHE SPENT THREE CENTS FOR CANDY AND ONE CENT FOR A GUM BALL. THEN HER MONEY WAS ALL GONE. HOW MUCH MONEY DID MARY HAVE BEFORE SHE SPENT ANY? (pause)

MARY HAD SOME MONEY. SHE SPENT THREE PENNIES FOR CANDY AND ONE PENNY FOR A GUM BALL. THEN HER MONEY WAS ALL GONE. HOW MANY PENNIES DID MARY HAVE BEFORE SHE SPENT ANY? MARK THE NUMBER THAT TELLS HOW MANY PENNIES MARY HAD BEFORE SHE SPENT ANY.

1	2	3	4

NOW, TURN TO THE NEXT PAGE.

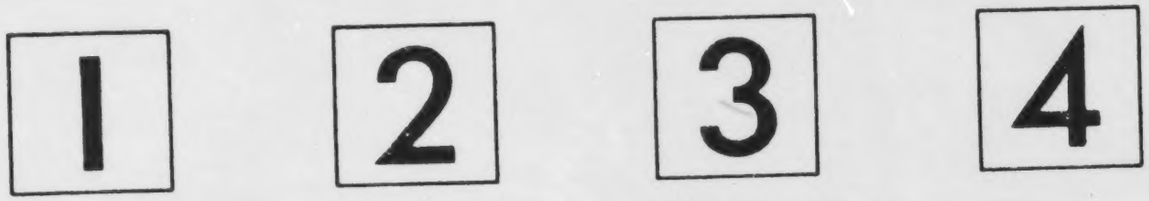
60

61

LOOK AT THE NUMBERS AT THE TOP OF THE PAGE. HERE IS THE STORY.

PATTI HAS THREE COOKIES. IF SHE EATS ONE OF THEM, HOW MANY COOKIES WILL SHE HAVE LEFT? (pause)

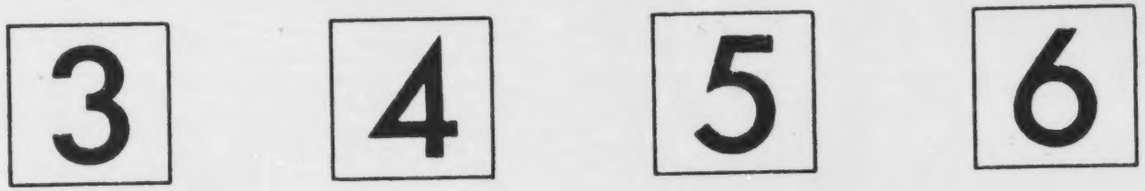
PATTIE HAS THREE COOKIES. IF SHE EATS ONE OF THEM, HOW MANY COOKIES WILL SHE HAVE LEFT? MARK THE NUMBER THAT TELLS HOW MANY COOKIES ARE LEFT.



LOOK AT THE NUMBERS AT THE BOTTOM OF THE PAGE. NOW LISTEN TO THE STORY.

TONY HAD SOME BLOCKS. DAVID GAVE HIM FOUR MORE BLOCKS. NOW TONY HAS SEVEN BLOCKS. HOW MANY BLOCKS DID TONY HAVE BEFORE DAVID GAVE HIM MORE? (pause)

TONY HAD SOME BLOCKS. DAVID GAVE HIM FOUR MORE BLOCKS. NOW TONY HAS SEVEN BLOCKS. HOW MANY BLOCKS DID TONY HAVE BEFORE DAVID GAVE HIM MORE? MARK THE NUMBER THAT TELLS HOW MANY BLOCKS TONY HAD BEFORE DAVID GAVE HIM MORE.



NOW, TURN TO THE NEXT PAGE.

LOOK AT THE NUMBERS AT THE TOP OF THE PAGE. NOW LISTEN TO THE STORY.

JOHN HAD SOME PENNIES. HE LOST THREE OF THEM. NOW HE HAS FOUR PENNIES. HOW MANY PENNIES DID JOHN HAVE BEFORE HE LOST ANY? (pause)

JOHN HAD SOME PENNIES. HE LOST THREE OF THEM. NOW HE HAS FOUR PENNIES. HOW MANY PENNIES DID JOHN HAVE BEFORE HE LOST ANY? MARK THE NUMBER THAT TELLS HOW MANY PENNIES JOHN HAD BEFORE HE LOST ANY.

3 5 7 4

LOOK AT THE NUMBERS AT THE BOTTOM OF THE PAGE. NOW LISTEN TO THE STORY.

BILL HAS FIVE PENCILS. JOHN HAS THREE PENCILS. HOW MANY MORE PENCILS DOES BILL HAVE THAN JOHN? (pause)

BILL HAS FIVE PENCILS. JOHN HAS THREE PENCILS. BILL HAS MORE PENCILS THAN JOHN. HOW MANY MORE PENCILS DOES BILL HAVE THAN JOHN? MARK THE NUMBER THAT TELLS HOW MANY MORE PENCILS BILL HAS THAN JOHN.

1 3 5 2

NOW, TURN TO THE NEXT PAGE.

LISTEN CAREFULLY TO THE STORY.

MRS. JONES BOUGHT SIX EGGS. SHE USED ONE HALF THE EGGS TO MAKE A CAKE. HOW MANY EGGS DID SHE USE?

MRS. JONES BOUGHT SIX EGGS. SHE USED ONE HALF THE EGGS TO MAKE A CAKE. HOW MANY EGGS DID SHE USE? MARK THE NUMBER THAT TELLS HOW MANY EGGS MRS. JONES USED.

2	3	4

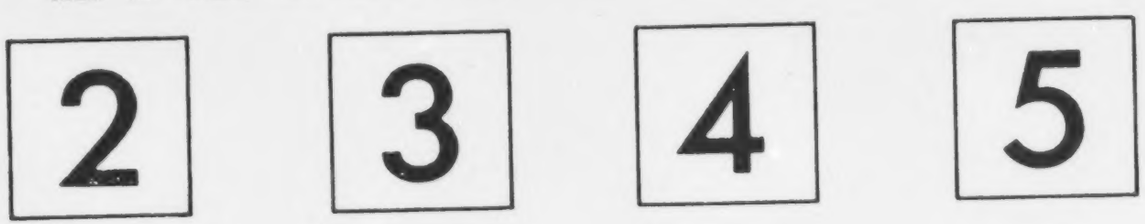
NOW, TURN TO THE NEXT PAGE.

LOOK AT THE NUMBERS AND LISTEN TO THE QUESTION.

WHEN SOMETHING IS CUT IN FOURTHS, HOW MANY PIECES ARE THERE? (Pause)

WHEN SOMETHING IS CUT IN FOURTHS, HOW MANY PIECES ARE THERE?

MARK THE NUMBER THAT TELLS HOW MANY PIECES.



Instructions for the remainder of Form 2-01 are to be read after the first twenty-six items (pages 1-20) have been completed:

YOU ARE GOING TO WORK THE REST OF THE BOOKLET BY YOURSELVES. YOU ARE TO WRITE THE MISSING NUMBER FOR EACH EXAMPLE. FINISH ALL THE EXAMPLES YOU KNOW HOW TO DO. IF YOU NEED THINGS TO COUNT, USE YOUR FINGERS OR MAKE MARKS ON THE PAGE. WHEN YOU HAVE FINISHED ONE PAGE GO ON TO THE NEXT PAGE UNTIL YOU HAVE COMPLETED THE BOOKLET.

THERE ARE SOME EXAMPLES THAT YOU MAY NOT HAVE HAD. IF YOU COME TO EXAMPLES YOU DON'T KNOW HOW TO DO, GO ON TO THE NEXT PAGE. WORK CAREFULLY AND COMPLETE ALL EXAMPLES YOU KNOW HOW TO DO. ARE THERE ANY QUESTIONS?

(If there are questions, repeat any of the above instructions appropriate to the questions.)

REMEMBER, TAKE YOUR TIME AND COMPLETE ALL EXAMPLES YOU KNOW HOW TO DO. TURN TO THE NEXT PAGE IN YOUR BOOKLET. YOU MAY BEGIN.

In order to keep the children who may finish early from disturbing those who are still working, we have provided dot-to-dot activity pages. These should be placed in an accessible spot in the examination room. When a child has finished his answer booklet, and you have checked to see that he has completed it, he may be allowed to take one of the dot-to-dot activity pages to work on while the slower children are finishing their tests. The children may keep these pages, and the slower children should be given one to take home when the testing has been completed.

ITEM C

DESCRIPTION OF HOLLINGSHEAD SOCIOECONOMIC INDEX

NLSMA REPORTS, NO. 9, NON-TEST DATA

Section 2:

NLSMA

Demographic Data Form

Coding Manual

Instructions for coding of occupations and educational levels of students' parents on Demographic Data Form.

In this envelope you will find materials for you to use in the coding of the occupations and educational levels of the parents of students who are participating in the NLSMA tests.

One Demographic Data Form is enclosed for each participating class in each school. On the forms are listed the identification numbers and names of the students who have taken the tests. Under the column headed Occupation you will insert the code number you will have selected for the father and for the mother of each student. You will use the same procedure for the column headed Education.

In the following pages of this set of instructions you will find:

1. A code list for education levels of the students' parents.
2. A seven-page code list of categories under which you will make your selections for the occupations of the students' parents.
3. A sample list of occupations with proper code numbers beside them to give you examples in addition to the examples given in the seven-page code list.

As far as possible, you will work with the individual student folders in the school offices. If all information is not available, please ask the principal for advice or help.

Use the following steps for coding each occupation:

Choose a specific category from the seven-page code list.

Make a decision as to Self Employed or Salaried.

Make a decision on the level of skill; that is, skilled, semi-skilled, or unskilled. In some cases there are no options, such as Professional can be only skilled.

Record the appropriate code number.

If you are in doubt as to the level of category with some occupations, go to the highest level for coding. In a case where absolutely no information is available as to the occupation of a parent, put NA in the Remarks column. If you feel that it is impossible for you to classify an occupation, write the name of the job in place of a code number so that it may be coded at NLSMA headquarters.

On the Demographic Data Forms, if there are listed any students who have dropped out of the NLSMA testing program, please cross out their names and write "Dropped" in the Remarks column. You will not need to record codings for those who may have dropped out. If there are any other unusual situations

Instructions for coding continued

regarding any of the students which might be of value to our records, please note them also under Remarks beside the proper names.

Please make no entries under the columns New Science Course and no entries under Columns A, B, C, and D. These columns will be used by NLSMA at a later date.

The information gathered from this form will be held in strict confidence. It is not our purpose to place any value judgments or class labels on types of occupations, structures of specific communities, or on educational level of parents. Your help in assisting us in reaching an objective record of the demographic data is crucial to our Study. The over-all purpose is intended only to provide factual evidence for systematic evaluations.

When your work is carefully completed, replace (in the same envelope in which you received the materials) the Demographic Data Forms. Turn in all of the envelopes to the Test Center Director whose name and address are shown in the upper right-hand portion of the Demographic Data Form.

Code list for education levels of students' parents.

Code No.	
11	Finished 8th grade or less
12	Finished 9th, 10th, or 11th grade
13	High school graduate
14	Finished 1st, 2nd, or 3rd year of college
15	College graduate (Bachelor's degree)
16	Post graduate (without degree beyond Bachelor's)
17	Post graduate (Master's degree)
18	Post graduate (Doctor's degree - include medical)

	Self Employed			Salaried			
	Skilled	Semi-skilled	Unskilled	Skilled	Semi-skilled	Unskilled	Other
Professional	111	--	--	114	--	--	--
May be either Self Employed or Salaried. Covers those engaged in a specialty, those with training beyond high school, those who may be licensed to practice by a State or Federal organization. Include: all public and private teachers; superintendents of schools; deans of university departments; librarians; lawyers and judges (except politically judges who should be coded under 194); all medical doctors; clergymen; architects; engineers; certified accountants; optometrists; opticians; social workers; psychologists; general scientists.							
Business Owner	121	--	--	--	--	--	--
Must be Self Employed. Include: all business owners regardless of the size of the business (except farm owners who will be coded under 211).							

	Self Employed			Salaried			
	Skilled	Semi-skilled	Unskilled	Skilled	Semi-skilled	Unskilled	Other
Business: Managerial and Executive	--	--	--	134	--	--	--
Must be Salaried. (Refer also to 214) Include: those whose primary activity involves the supervising of others; may range from an executive in large industry to a foreman or shop supervisor. Do not include here, for example, a pilot whose primary job is piloting, even though his crew is under his care. He would be classified under 144.							
Business or Industry: Technical and/or Nonmanagerial	141	142	--	144	145	--	--
May be either Self Employed or Salaried. If unknown, classify as Salaried. Skilled covers specific work which requires more than one year to learn. Examples: photographer, efficiency expert, computer programmer, secretary, non-professional accountant, chef (but not a short order cook who would be classified under 165), plumber, mason, electrician, carpenter, high level mechanic, bookkeeper. (Continued on next page)							

	Self Employed			Salaried			
	Skilled	Semi-skilled	Unskilled	Skilled	Semi-skilled	Unskilled	Other
Continued:	141	142	--	144	145	--	--
Semi-skilled covers specific work which requires between 2 weeks and 1 year to learn in a typical situation. Examples: bank teller, office clerk, truck driver, taxi cab dispatcher, cab driver, merchant marine, butcher, baker, grocery checker.							
Sales Persons	--	--	--	154	155	--	--
Must be Salaried.							
Skilled covers sales persons (retail or wholesale) who are required to have high level knowledge of the products they are selling. Example: one who sells electronic materials and is required to give advice as to what is needed in specific situations.							
Semi-skilled covers sales persons who are not required to have highly specialized knowledge of the products they are selling. Example: department store sales clerk.							

	Self Employed			Salaried			
	Skilled	Semi-skilled	Unskilled	Skilled	Semi-skilled	Unskilled	Other
Laborers	--	--	--	--	165	166	--
Must be salaried. Semiskilled covers specific work which requires between 2 weeks and 1 year to learn in a typical situation. Examples: domestic, fruit picker, packer, shipping clerk, warehouseman, short order cook, simple clerical duties such as errand clerk or mailing clerk. Unskilled covers work that can be learned in less than 2 weeks. Examples: ditch digging, mowing lawns, ticket taking, locker room attendant, janitor.							
Military Officer	--	--	--	174	--	--	--
A skilled salaried person who has an officer status in the armed forces.							
Military - Enlisted	--	--	--	184	--	--	--
A salaried non-officer in the armed forces. Note: a Warrant Officer should be included here as an enlisted man.							

	Self Employed			Salaried			
	Skilled	Semi-skilled	Unskilled	Skilled	Semi-skilled	Unskilled	Other
Political: Elected or Legislative	--	--	--	194	--	--	--
Must be Salaried. Skilled persons who hold elected posts in the State, County, or Federal political systems. Would include all State Assemblymen; State Congressmen; United States Senators and Congressmen; and elected Judges.							
Writer, Artist, Musician, Actor	201	--	--	204	--	--	--
May be either Self Employed or Salaried. Include: all writers, novelists, journalists, advertising copy writers, television script writers; all artists, commercial and non-commercial; all musicians (including private performers, members of symphony or jazz orchestras; entertainers, actors, and actresses. These persons should be earning money. Those who are participating in the "arts" as only a hobby without pay should not be included here.							

	Self Employed			Salaried			
	Skilled	Semi-skilled	Unskilled	Skilled	Semi-skilled	Unskilled	Other
Agriculture	211	--	--	214	215	216	--
May be either Self Employed or Salaried. 211 covers farm or ranch owners, regardless of the size of the farm or ranch. 214 covers farm or ranch foremen. 215 covers semi-skilled farm or ranch workers who would need from 2 weeks to a year to learn their work. 216 cpvers unskilled farm or ranch workers who would need less than 2 weeks to learn their work.							
Students	--	--	--	--	--	--	227
Include all who are primarily involved in studies. Examples: college students (at least half-time), student nurses, students of the ministry. In other words, those students who are not family bread-winners or housewives.							

	Self Employed			Salaried			
	Skilled	Semi-skilled	Unskilled	Skilled	Semi-skilled	Unskilled	Other
Housewife	--	--	--	--	--	--	237
The housewife would be categorized only under this classification as she would not be otherwise employed.							
Unemployed	--	--	--	--	--	--	247
This should cover a bread-winner of a family, in case he or she should be unemployed. It should not include a housewife who is so categorized.							
Deceased	--	--	--	--	--	--	257

Occupation	Code	Occupation	Code
Cashier	145	Plumber	144
Gardener	165	Miner or Smelterman	165
Mill worker	165	Seamstress	165
Fire Chief	144	Editor	134
Telephone operator	145	Nurse	114
Owner of editorial firm	121	Personnel Director	134
Bank teller	145	Lumberjack	166
Sailor (non-military)	145	Embalmer	144
Meat cutter	145	Inspector	144
Student nurse	227	Purchasing agent	144
Demonstrator	145	Insurance salesman	154
Clergyman	114	Commentator	204
Credit manager	134	Dispatcher	145
Piano tuner	145	Draftsman	144
School superintendent	114	Railroad conductor	144
News reporter	144	Broker	121
Service station manager	134	Factory worker (machines)	165
Typesetter	165	Store clerk	155
Farm worker	275	Office machine operator	145
Police officer	144	Auctioneer	144
Dietician	114	Upholsterer	165
Owner of insurance firm	121	Postmaster	134
Ticket agent	154	Night club singer	204

This sample coding list is to serve as a guide. Slight differences in interpretation may exist, especially in categories 144, 145, 165, and 166. It is requested that you check your own consistency in intrepretation of the categories as applicable to your area.

ITEM D

SCHOOL PROFILE QUESTIONNAIRE

AND

CLASS PROFILE QUESTIONNAIRE

SCHOOL PROFILE

The data on this form will be used to provide a general description of each school involved in a PMDC project. To complete the form, circle one or more descriptions in each section, or write the necessary information in the appropriate blank.

SCHOOL _____ GRADE _____ PRINCIPAL INVESTIGATOR _____

1. Size: Total Number of Pupils Attending School _____.

2. Grade Levels:

   1-6 1-5 K-6 K-5 K-3 Other _____

3. Organization (Grades 1 and 2 only)

   Self Contained Classes Pod Or Open Concept Other _____

4. Community Served By School:

   Inner City Urban Suburb Urban

   Minority

   Upper-Middle Income Middle-Low Income Low Income Other _____

5. Special Services:

   Reading Resource Teacher Math Resource Teacher Title 1 Assistance

   Other _____

6. Support:

   Public Private Church University

7. Additional Comments

CLASS PROFILE

The data on this form will be used to provide a general description of each class involved in a PMDC project. To complete the form, circle one or more descriptions in each section, or write the necessary information in the appropriate blank.

SCHOOL _____ GRADE _____ PRINCIPAL INVESTIGATOR _____

1. Class Size: Total number of pupils in math class or section _____

2. Assignment of pupils to math class:

   Heterogenuous grouping Homogeneous grouping

   If homogeneous grouping, identify criteria _____

3. Instruction Mode:

   Individualized Total Class Small Groups Other _____

4. Basic Mathematics Textbook: _____

5. Supplementary mathematics materials which are available for use in the class:

   workbooks diagnostic tests filmstrips cassette tap

   manipulative aids games none other _____

6. Use of supplementary materials:

   Frequently Occasionally Never

7. Available supplementary instructional assistance for mathematics:

   Teacher Aides Paraprofessionals Parent Volunteers

   Older Pupils University Students None

8. Additional Comments

ITEM E

MASTER RECORD FORMS

Demographic Data Form.

School: _____ Teacher: _____ Grade Level: _____

Investigator: _____.

Pupil Name or I.D. Number	Occupation Code Number	Education Code Number	SEI [a]
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			

[a] You may return the Demographic Data Form to F.S.U. and we will compute the SEI.

PUPIL DATA--FIRST GRADE

SCHOOL PRINCIPAL INVESTIGATOR

Name or ID No.	Sex	Birth date	a. Grades Attended	Stanford Binet IQ	SEI	METROPOLITAN Num R.S	Total R.S.	Total P.R.	SMSG C.P	E.S	Order	Classify	COMMENTS
66													

a. Record K, if the child attended Kindergarten; F, if repeating first grade.
b. Record the raw scores for the number subtest and the total test; the percentile rank.
c. Record the number of correct responses for each sub-test.

97

98

PUPIL DATA--SECOND GRADE

SCHOOL _____ PRINCIPAL INVESTIGATOR _____

Name or ID No.	Sex	Birth Date	a.* Grades Attended	Stanford Binet IQ	SEI	METROPOLITAN b.* Word Anl. R.S.	Word Anl. PR	Tot. Read RS	Tot. Read PR	Math RS	Math PR	SMSG c.* NC	PV	CON	A	COM	COMMENTS
67																	
199																	700

a. Record K, if attended kindergarten; F, if attended first grade; an S, if repeating second grade.
b. Record the raw scores and percentiles for the Word Analysis, Total Reading, and Total Mathematics Subtests.
c. Record the number of correct responses for each subtest: Number Comparison (1-7); Place Value (8-15); Concepts (16-18 and 26); Application (19-25) Computation (27-36).

00

ITEM F

REPORT

ON

PPELIMINARY TESTING PROGRAM

To: PMDC Staff Members
From: Tom Denmark
Date: 4 September 1974
Re: Observations in Administering the SMSG Tests

Last week we gave the chosen SMSG tests to an entire first grade class (29 pupils) and to an entire second grade class (33 pupils). The school population we used was predominantly black and the school served a low economic rural community. We tried to follow the prescribed instructions for administering each test. This was a trial run to help us get a feeling for mechanics of giving these tests and to help us evaluate the materials we reproduced. I hope that the following comments will be helpful as you make plans for the testing sessions.

FIRST GRADE

1. This test is individually administered. I took from 15 to 20 minutes for each child.

2. We worked in a large classroom and conducted 5 interviews at one time. This was not a satisfactory arrangement, because the pupils sometimes responded to the directions being given by another tester. I would suggest that you test at most 2 or 3 pupils in one room.

3. A flat table for the children to work on is a must. The picture cards slide aound, even on a flat surface, so you might consider gluing a piece of felt on the back of each card.

4. We used a code to record certain behaviors, problem solving techniques, or responses. See the code described under the comment sections of the enclosed pupil score sheet. We found this code to be very helpful as we analyzed the data.

SECOND GRADE

1. This test is administered to small groups of 5 to 6 pupils. In an effort to minimize the total testing time, we tried to have two groups in one large classroom. This was a mistake. It may take longer to complete the testing, but one group to one room is the only feasible procedure.

2. The test is quite long--from 40 to 50 minutes per group. I would suggest splitting the test into two parts. Give part one (items 1-18) to a group, give the group a break, and give the second part later in the day.

3. As we were administering the test, we noted that some item numbers had been blocked out on some pages in the pupil booklets. The items, however, are numbered in the test manual. Also, the pages in the pupils booklets are numbered. This was not a problem as we gave the test, but it slowed down the recording of the data. The following items are not numbered: 1, 2, 5, 8, 9, 10, 13, 14, 15, 18, 25, 26.

4. In the SMSG instructions reference is made to the utilization of dot-to-dot worksheets to keep pupils occupied as they finish the test. Such worksheets have not been provided. We asked pupils to draw pictures on the back of the test booklet. This procedure was quite satisfactory. The maximum variance in completion time was only 10 minutes.

Form 1-01

PUPIL SCORE SHEET First Grade : Fall Inventory, 1974

Pupil's Name: _____ Teacher's Name: _____

I.D. Number : _____ Tester's Name : _____

School: _____ Date Given: _____

Comments:

COUNTING MEMBERS OF A GIVEN SET

Picture Cards

Item No.	Card No.	Counted Correctly	Attempted, Incorrect	No Attempt
6	1			
7	2			
8	3			
9	4			
10	5			
11	6			
12	7			
13	8			
14	9			
15	10			

Comments: Record each response correct or incorrect.

2. Behavior Code: P: Pupil points to objects as he counts.
   V: it is obvious that the pupil is counting but he does not physically point.
   A: Automatic or impulsive response
   R: Does not follow a systematic procedure as he counts, rather skips around as he counts.

EQUIVALENT SETS

Dots

Item No.	Card No.	Correct Response	Incorrect Response	No Attempt
16	1			
17	2			
18	3			
19	4			
20	5			
21	6			

Comments:

1. Record number of buttons placed on card.
2. Behavior Code:
   M: matched buttons to dots one-to-one.
   C: counted dots, then counted buttons
   P: Made a pattern with the buttons similar to the dot pattern.

75

Grade 1
Fall

74

TESTER'S SCORING GRID:

Item No.	Ordered:		Ordered correctly Largest-smallest or Smallest-largest	Ordered with error (ends correct, confusion in middle size items or some other partially correct attempt)	Randomly ordered	No Attempt	Handed:		Correct Response (✓)	Incorrect Response (✓)	No Attempt (✓)
22-23	1a	Circular Shapes					1b	smallest circle			
24	2	Triangular Shapes									
25-26	3a	Buttons					3b	smallest button			
27-28	4a	Blocks					4b	largest block			
29-30	5a	Plastic Straws					5b	shortest straw			
31-32	6a	Rectangular Shapes					6b	longest shape			

Comments: Behavior Code

1. L - S or S - L, if correct, to denote orientation

2. If not connect, use numbers to record order. 1, denote, the smallest piece. For example, 4-1-2-3 denotes largest-smallest-next to smallest-next to largest.

1. Use numbers (1 is the smallest piece) to record the piece handed to you.

Form 1-01
Items 22-32

ITEM G

SUMMARIES OF FIRST AND SECOND GRADE DATA

BY INDIVIDUAL SCHOOLS

Summaries of the baseline data collected at individual schools are reported in this appendix. For each school the following information is reported: (a) description of school and community environment, (b) description of classroom setting, and (c) statistical data pertinent to the major variables.

School One

School Profile

A public elementary school with 400 students consisting of grades K through 5. It is an urban school serving a primarily minority community. The classes are self-contained. A reading resource teacher, a math resource teacher, and Title I assistance are available.

Class Profile: Grade 1

One first grade math class participated in the PMDC testing program. It was a heterogeneous class consisting of 29 pupils (18 boys and 11 girls). Instruction was conducted in small groups or on an individualized basis. Holt, Rinehart, and Winston Holt School Mathematics, Book 1 (1974) was the basic text. Manipulative aids, workbooks, and games were frequently used. Teacher aids and university students assisted with the instructional program.

Table 28

Summary Of Test Data For School One: Grade One

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	73.7	3.7	73.0	11
IQ	96.0	16.1	93.5	42
SEI	463.7	165.1	445.0	582
Metropolitan Readiness	52.4	18.3	51.8	69
SMSG Countin	5.8	3.0	6.8	10
SMSG Equivalent Sets	3.0	2.3	4.0	6
SMSG Ordering	3.5	2.4	4.1	6
SMSG Classification	3.9	1.3	4.4	4

Class Profile: Grade 2

One second grade math class participated in the PMDC testing program It was the top group of three math sections in the school. The grouping of students for math instruction was based on the results of an achievement test prepared by the school faculty. There were 23 pupils in the class (18 boys and 5 girls). The class was taught as one group using Houghton-Mifflin Modern School Mathematics: Structure and Use, Book 2 (1970) as the basic text. Diagnostic tests, games, workbooks, film strips, and cassette tapes were frequently used. University students assisted with the instructional program.

Table 29

Summary Of Test Data For School One: Grade Two

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	87.4	2.3	87.5	9
IQ	109.4	15.8	105.6	53
SEI	323.3	164.1	303.2	505
Metropolitan Reading	56.9	2.8	55.2	45
Metropolitan Math	46.3	5.3	45.1	19
SMSG Number Comparison	5.4	2.0	6.0	7
SMSG Place Value	4.6	2.6	5.0	8
SMSG Comprehension	2.0	1.2	2.1	4
SMSG Application	4.8	2.3	5.4	7
SMSG Computation	8.0	2.7	8.4	10

School Two

School Profile

A university-supported school of 887 students including nursery school through grade 12. It serves students from all income groups. The classes are self-contained. A resource reading teacher assists with the instructional program.

Class Profile: Grade 1

One first grade class participated in the PMDC testing program. It was a heterogeneous class consisting of 23 pupils (12 boys and 11 girls). The class was taught as one group using Holt, Rinehart, and Winston Holt School Mathematics, Book 1 (1974) text. Manipulative aids were used occasionally by the teacher, seldom by the students. Worksheets, often those supplied by Holt, were occasionally used. Three high school students were usually present for approximately the first half of the math class.

Table 30

Summary Of Test Data For School Two: Grade One

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	74.4	3.3	74.1	11
IQ	119.1	11.9	121.8	44
SEI	247.8	84.7	248.5	255
Metropolitan Readiness	72.6	10.4	73.8	42
SMSG Counting	7.6	2.1	8.1	7
SMSG Equivalent Sets	5.2	.8	5.3	3
SMSG Ordering	5.2	1.9	5.8	6
SMSG Classification	5.0	.2	5.0	1

Class Profile: Grade 2

One second grade math class participated in the PMDC testing program. It was a heterogeneous class consisting of 25 students (13 boys and 12 girls). Holt, Rinehart, and Winston Holt School Mathematics, Book 1 (1974) text was used. The class was taught as one group; the texts were periodically collected and checked. Sometimes the teacher used worksheets or aids with the entire class. Manipulative aids, SRA Math Cards, and filmstrips were occasionally used. Three high school students occasionally worked with the students on an individual basis; a university student was available for typing and grading purposes.

Table 31

Summary Of Test Data For School Two: Grade Two

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	86.6	3.2	85.8	11
IQ	111.1	14.0	111.5	55
SEI	297.5	137.8	256.2	435
Metropolitan Reading	55.0	16.6	57.6	50
Metropolitan Math	43.5	9.4	44.5	36
SMSG Number Comparison	5.7	2.0	6.3	7
SMSG Place Value	4.8	2.2	5.7	7
SMSG Comprehension	2.2	1.2	2.4	4
SMSG Application	4.8	2.2	5.4	7
SMSG Computation	7.6	2.6	8.4	10

School Three

School Profile

A public elementary school consisting of 560 pupils in grades K through 5. The school has an open concept organization and serves the suburbs of Austin, Texas, primarily middle-low income groups. A reading resource teacher and a math resource teacher assist with the instructional program.

Class Profile: Grade 1

One first grade math class participated in the PMDC testing program. It was a heterogeneous class consisting of 30 pupils (16 boys and 14 girls). The class was taught as one group, in small groups, or on an individualized basis. Addison Wesley's Investigating School Mathematics, Book 1, (1967) was the basic text. Workbooks, manipulative aids, games, cassette tapes, and CPL materials (Continuous Progress Lab, Educational Progress Corporation) were frequently used as supplimentary materials. No supplementary instructional assistance was available for mathematics.

Table 32

Summary Of Test Data For School Three: Grade One

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	79.2	4.7	78.8	22
IQ	118.5	14.1	113.5	31
SEI				
Metropolitan Readiness	73.0	12.2	75.6	65
SMSG Counting	7.9	2.3	8.6	10
SMSG Equivalent Sets	5.6	1.0	5.9	5
SMSG Ordering	5.6	1.2	5.9	5
SMSG Classification	4.9	.4	4.9	2

Class Profile: Grade 2

One second grade math class participated in the PMDC testing program. It was a heterogeneous class consisting of 29 pupils (16 boys and 13 girls). Instruction was carried out in small groups or on an individualized basis using Addison Wesley's Investigating School Mathematics, Book 2 (1967) as the basic text. Diagnostic tests and CPL (Continuous Progress Laboratory) materials were frequently used as supplementary materials. No supplementary instructional assistance was available for mathematics.

Table 33

Summary Of Test Data For School Three: Grade Two

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	89.3	4.5	90.0	16
IQ	119.5	15.6	120.0	35
SEI				
Metropolitan Reading	71.7	7.1	74.1	32
Metropolitan Math	55.9	4.0	57.0	15
SMSG Number Comparison	5.7	1.7	6.2	7
SMSG Place Value	6.0	2.0	6.6	8
SMSG Comprehension	2.4	1.1	2.6	4
SMSG Applications	5.6	1.9	6.1	7
SMSG Computation	9.2	1.9	9.7	10

School Four

School Profile

A public elementary school consisting of 274 pupils in grades K through 5. Classes are self-contained. The school serves the rural and city communities.

Class Profile: Grade 1

Two first grade math classes participated in the PMDC testing program. The classes were heterogeneous with a total of 38 pupils (24 boys and 14 girls). Instruction was carried out in small groups. Houghton-Mifflin's Modern School Mathematics: Structure and Use Book 1 (1970) was the basic text. Workbooks and manipulative aids were occasionally used. No supplementary instructional assistance for mathematics was available.

Table 34

Summary Of Test Data For School Four: Grade One

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	78.0	4.7	48.0	20
IQ	115.7	17.6	113.0	71
SEI	371.0	191.3	319.5	572
Metropolitan Readiness	79.5	11.4	82.8	50
SMSG Counting	8.2	1.7	8.8	7
SMSG Equivalent Sets	5.7	.5	5.8	1
SMSG Ordering	5.6	1.2	5.9	6
SMSG Classification	4.8	.6	4.9	3

Class Profile: Grade 2

Two second grade math classes participated in the PMDC testing program. The classes were heterogeneous with a total of 33 pupils (19 boys and 14 girls). Instruction was carried out in small groups using Houghton-Mifflin's Modern School Mathematics: Structure and Use, Book 2 (1970) as the basic text. Workbooks and manipulative aids were occasionally used as supplementary materials. No supplementary instructional assistance was available for mathematics.

Table 35

Summary Of Test Data For School Four: Grade Two

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	89.8	4.3	90.0	16
IQ	121.0	10.1	117.8	62
SEI	340.0	301.3	348.0	524
Metropolitan Reading	72.5	6.8	74.0	30
Metropolitan Math	53.7	6.8	56.0	34
SMSG Number Comparison	6.4	.8	6.5	5
SMSG Place Value	5.2	1.8	5.5	6
SMSG Comprehension	2.7	.9	2.5	5
SMSG Application	5.8	1.2	6.0	5
SMSG Computation	9.0	1.0	9.2	5

School Five

School Profile

A public elementary school with 340 pupils in grades K through 5. Classes are organized according to the open concept. The school serves urban upper and lower income groups.

Class Profile: Grade 1

Two first grade math classes participated in the SMSG reading program. The classes were heterogeneous, with a total of 61 pupils (33 boys and 28 girls). Instruction was carried out in small groups, with regrouping occurring every 2 to 3 weeks on the basis of achievement. No math text was used. Manipulative aids and games were occasionally used. Teacher aide and university students assisted with the instructional program.

Table 36

Summary Of Test Data For School Five: Grade One

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	75.0	3.7	73.8	12
IQ	113.4	17.4	118.5	62
SAT	458.4	108.6	468.6	524
Metropolitan Readiness	58.1	25.1	64.5	90
WRAT Counting	6.8	3.0	7.8	10
WRAT Equivalent Sum	6.6	4.7	6.1	6
WRAT Ordering	6.4	3.2	6.0	6
WRAT Classification	6.3	4.1	6.7	6

School Site

School Profile

A public elementary school with 380 students in grades 1 through 5. It serves the inner city minority and upper-middle as well as low income groups. Classes are self-contained. Some reading and math assistance is available.

Class Profile: Grade 1

Four first grade math classes participated in the PMAT teaching program. The classes were heterogeneous with a total of 79 students (39 boys and 39 girls). Instruction was carried out primarily in small groups. Addison Wesley's Investigating School Mathematics, Book 1 (1987) was the basic text. Manipulative aids, workbooks, games and activities were frequently used. Student teachers from the university assisted with the instructional program.

Table 37

Summary Of Test Data For School Six: Grade One

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	75.6	4.3	74.8	22
IQ	110.2	26.4	110.8	81
SEI	401.3	178.1	375.6	429
Metropolitan Readiness	91.3	20.8	88.2	83
WRAT Counting	8.8	3.2	8.8	10
WRAT Equivalent Sets	4.8	1.6	5.4	6
WRAT Ordering	4.5	2.5	5.5	6
WRAT Classification	4.6	2.0	4.6	5

Class Profile: Grade 2

The second grade math classes participated in the PMC testing program. The classes were heterogeneous with a total of 27 pupils (16 boys and 11 girls). Instruction was carried out in small groups. Addison Wesley's Investigating School Mathematics, Book 2 (1967) was the basic text. Workbooks, manipulative aids, and games were occasionally used. Teacher aids assisted with the instructional program.

Table 38

Summary Of Test Data For School Six: Grade Two

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	88.2	3.3	88.9	13
IQ	106.6	15.6	106.5	60
SEI	417.7	166.6	426.4	428
Metropolitan Reading	36.8	14.0	37.0	47
Metropolitan Math	40.6	6.8	41.5	24
SRBS Number Comparison	6.7	1.5	6.4	4
SRBS Place Value	6.5	1.5	6.5	4
SRBS Computation	6.5	1.2	6.5	4
SRBS Application	6.5	1.5	6.5	4
SRBS Computation	6.5	1.2	6.5	4

School Series

School Profile

A public elementary school with 415 students in grades 1 through 5. Classes are organized according to the open concept. It serves both upper-middle and low income groups. Title reading and math assistance are available.

Class Profile: Grade 2

Four first grade classes participated in the PMDC teaching program. The classes were heterogeneous with a total of 99 pupils (51 boys and 47 girls). Instruction was carried out in small groups using Addison Wesley's Investigating School Mathematics, Book 2 (1987) as the basic text. Manipulative aids, games, filmstrips, and workbooks were frequently used. Teacher aides, older pupils, paraprofessionals, university students, and parent volunteers assisted with the instructional program.

Table 39

Summary Of Test Data For School Seven: Grade One

Variable	Raw Scores			
	Mean	Standard Deviation	Median	Range
Age In Months	77.5	4.9	78.0	21
IQ	109.5	15.5	109.5	52
SEI	488.7	206.0	560.3	524
Metropolitan Readiness	65.0	17.5	70.2	66
SMSG Counting	6.5	3.0	7.6	10
SMSG Equivalent Sets	4.7	1.5	5.0	6
SMSG Ordering	4.5	2.3	5.7	6
SMSG Classification	4.7	.8	4.9	4